

AMENDMENT TO THE CLAIMS

1. (Previously Amended) A method for DC level control for a line card, comprising:

receiving a digital input signal;

determining a first DC component value of the digital input signal at a first selected time;

determining a second DC component value of the digital input signal at a second selected time;

determining a difference between the first DC component value and the second DC component value; and

providing the first DC component value to a digital-to-analog converter in response to determining that the difference is less than a first selected value.

2. (Original) The method of claim 1, further comprising subtracting the difference between the first DC component value and the second DC component value from the digital input signal.

3. (Original) The method of claim 1, further comprising providing the second DC component value to a digital-to-analog converter in response to determining that the difference is greater than the first selected value.

4. (Previously Amended) The method of claim 1, the line card being linked to a customer premises by a subscriber line, wherein determining the second DC component value of the digital input signal at the second selected time includes determining a value proportional to the DC component of a signal on the subscriber line.

5. (Original) The method of claim 1, wherein the digital input signal includes voice and data components.

6. (Previously Amended) The method of claim 1, the line card including an analog-to-digital converter, wherein the first selected value is in a range of 1/100th to 1/10th of full scale voltage of the analog-to-digital converter.

7. (Previously Amended) An apparatus, comprising:

a digital-to-analog converter; and

logic coupled to the digital-to-analog converter, the logic capable of:

receiving a digital input signal;

determining a first DC component value of the digital input signal at a first selected time;

determining a second DC component value of the digital input signal at a second selected time;

determining a difference between the first DC component value and the second DC component value; and

providing the first DC component value to the digital-to-analog converter in response to determining that the difference is less than a first selected value.

8. (Original) The apparatus of claim 7, wherein the logic is further capable of subtracting the difference between the first DC component value and the second DC component value from the digital input signal.

9. (Previously Amended) The apparatus of claim 7, wherein the logic is further capable of providing the second DC component value to a digital-to-analog converter in response to determining that the difference is greater than the first selected value.

10. (Original) The apparatus of claim 7, wherein the digital input signal includes voice and data components.

11. (Previously Amended) The apparatus of claim 7, the apparatus including an analog-to-digital converter, wherein the first selected value is in a range of 1/100th to 1/10th of full scale voltage of the analog-to-digital converter.

12. (Previously Amended) An apparatus, comprising:

a digital-to-analog converter; and

a DC cancellation feedback loop comprising:

an analog-to-digital converter capable of receiving a signal having a DC component from a subscriber line, the analog-to-digital converter capable of converting the signal to a digital signal;

DC cancellation logic capable of approximating a first DC value proportional to the DC component of the digital signal at a first selected time and a second

DC value proportional to the DC component of the digital signal at a second selected time;

first logic capable of determining a difference between the first DC value and the second DC value and providing the difference to the DC cancellation logic; and

second logic capable of providing the first DC value to the digital-to-analog converter in response to determining that the difference is less than a first selected value.

13. (Previously Amended) The apparatus of claim 12, wherein the second logic is further capable of providing the second DC component value to a digital-to-analog converter in response to determining that the difference is greater than the first selected value.

14. (Original) The apparatus of claim 12, wherein the digital signal includes voice and data components.

15. (Previously Amended) The apparatus of claim 12, the apparatus including an analog-to-digital converter, wherein the first selected value is in a range of 1/100th to 1/10th of full scale voltage of the analog-to-digital converter.

16. (Previously Amended) A line card, comprising:

a subscriber line interface circuit capable of interfacing with a telephonic device and providing a signal;

a digital-to-analog converter; and

a digital signal processor configured to receive the signal from the subscriber line interface circuit, the digital signal processor capable of:

determining a first DC component value of a received digital input signal

at a first selected time;

determining a second DC component value of the digital input signal at a second selected time;

determining a difference between the first DC component value and the second DC component value; and

providing the first DC component value to the digital-to-analog converter in response to determining that the difference is less than a first selected value.

17. (Previously Amended) The line card of claim 16, wherein the digital signal processor is further capable of subtracting the difference between the first DC component value and the second DC component value from the digital input signal.

18. (Previously Amended) The line card of claim 16, wherein the digital signal processor is further capable of providing the second DC component value to a digital-to-analog converter in response to determining that the difference is greater than the first selected value.

19. (Original) The line card of claim 16, wherein the digital input signal includes voice and data components.

20. (Previously Amended) An apparatus, comprising:

means for receiving a digital input signal;

means for determining a first DC component value of the digital input signal at a first selected time;

means for determining a second DC component value of the digital input signal at a second selected time;

means for determining a difference between the first DC component value and the second DC component value; and

means for providing the first DC component value to a digital-to-analog converter in response to determining that the difference is less than a first selected value.